

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-10. (Cancelled).

Claim 11. (New) A transmission power control method for controlling transmission power by transmitting a spectrum spread signal having a transmission power control bit between a base station and a mobile station, the method comprising:

receiving, in the base station, the spectrum spread signal transmitted from the mobile station and measuring a ratio between the received signal power value and the interference power value, or a reception power value;

modulating the received spectrum spread signal and measuring a reception error rate of the modulated signal;

comparing the measured reception error rate with a predetermined upper limit target reception error rate and a predetermined lower limit target reception error rate;

correcting a ratio between a predetermined target received signal power value and the interference power value, or a predetermined target reception power value based on the result of the error rate comparison;

wherein the target received signal power value and the interference power value, or the target reception power value is not altered when the measured reception error rate is between the upper limit target reception error rate and the lower limit target reception error rate, and

wherein the target received signal power value and the interference power value, or the target reception power value is altered when the measured reception error rate is not between the upper limit target reception error rate and the lower limit target reception error rate;

comparing the measured ratio between the received signal power value and the interference power value, or a reception power value with the corrected ratio between the target received signal power value and the interference power value, or the target reception power value;

determining the transmission power control bit for controlling the transmission power of the base station based on the result of the power comparison, and transmitting the spectrum spread signal having the determined transmission power control bit from the base station to the predetermined mobile station; and

varying, in the mobile station, the transmission power based on the determined transmission power control bit of the received spectrum spread signal.

Claim 12. (New) A transmission power control method for controlling transmission power by performing site diversity reception for synthesizing received spectrum spread signals of the mobile stations at a higher hierarchy station after receiving spectrum spread signals having a transmission power control bit at a plurality of stations, the method comprising:

demodulating, in the higher hierarchy station, a received spectrum spread signal of a predetermined mobile station, and generating a synthesized signal by synthesizing the demodulated signal by the site diversity reception;

measuring a synthesized reception error rate of the generated synthesized signal;

comparing the measured synthesized reception error rate with a predetermined set target synthesized reception error rate;

correcting a predetermined set target reception error rate according to the mobile station based on the result of the error rate comparison;

receiving, in the base station, the spectrum spread signal transmitted from the mobile station and measuring a ratio between the received signal power and the interference power value, or a reception power value;

modulating the received spectrum spread signal and measuring a reception error rate of the modulated signal;

comparing the measured reception error rate with the corrected target reception error rate of the mobile station corrected by the higher hierarchy station;

correcting a ratio between a predetermined target received signal power value and the interference power value, or a predetermined target reception power value based on the result of the error rate comparison;

comparing the measured ratio between the received signal power value and the interference power value, or a reception power value with the corrected ratio between the target received signal power value and the interference power value, or the target reception power value;

determining the transmission power control bit for controlling the transmission power of the base station based on the result of the power comparison, and transmitting the spectrum spread signal having the determined transmission power control bit from the base station to the predetermined mobile station; and

varying, in the mobile station, the transmission power based on the determined transmission power control bit of the received spectrum spread signal.

Claim 13 (New). The transmission power control method of claim 12, wherein, in the step of correcting, the corrected target reception error rate of the mobile station corrected by the higher hierarchy station is structured by a predetermined upper limit target reception error rate and a predetermined lower limit target reception error rate, and

wherein the target received signal power value and the interference power value, or the target reception power value is not altered when the measured reception error rate is between the upper limit target reception error rate and the lower limit target reception error rate, and

wherein the target received signal power value and the interference power value, or the target reception power value is altered when the measured reception error rate is not between the upper limit target reception error rate and the lower limit target reception error rate.

Claim 14. (New) A transmission power control system for controlling transmission power by transmitting a spectrum spread signal having a transmission power control bit between a base station and a mobile station, the system comprising:

means for receiving, in the base station, the spectrum spread signal transmitted from the mobile station and measuring a ratio between the received signal power value and the interference power value, or a reception power value;

means for modulating the received spectrum spread signal and measuring a reception error rate of the modulated signal;

means for comparing the measured reception error rate with a predetermined upper limit target reception error rate and a predetermined lower limit target reception error rate;

means for correcting a ratio between a predetermined target received signal power value and the interference power value, or a predetermined target reception power value based on the result of the error rate comparison;

wherein the target received signal power value and the interference power value, or the target reception power value is not altered when the measured reception error rate is between the upper limit target reception error rate and the lower limit target reception error rate, and

wherein the target received signal power value and the interference power value, or the target reception power value is altered when the measured reception error rate is not between the upper limit target reception error rate and the lower limit target reception error rate;

means for comparing the measured ratio between the received signal power value and the interference power value, or a reception power value with the corrected ratio between the target received signal power value and the interference power value, or the target reception power value;

means for determining the transmission power control bit for controlling the transmission power of the base station based on the result of the power comparison, and transmitting the

spectrum spread signal having the determined transmission power control bit from the base station to the predetermined mobile station; and

means for varying, in the mobile station, the transmission power based on the determined transmission power control bit of the received spectrum spread signal.

Claim 15. (New) A transmission power control system for controlling transmission power by performing site diversity reception for synthesizing received spectrum spread signals of the mobile stations at a higher hierarchy station after receiving spectrum spread signals having a transmission power control bit at a plurality of stations, the system comprising:

means for demodulating, in the higher hierarchy station, a received spectrum spread signal of a predetermined mobile station, and generating a synthesized signal by synthesizing the demodulated signal by the site diversity reception;

means for measuring a synthesized reception error rate of the generated synthesized signal;

means for comparing the measured synthesized reception error rate with a predetermined set target synthesized reception error rate;

means for correcting a predetermined set target reception error rate according to the mobile station based on the result of the error rate comparison;

means for receiving, in the base station, the spectrum spread signal transmitted from the mobile station and measuring a ratio between the received signal power and the interference power value, or a reception power value;

means for modulating the received spectrum spread signal and measuring a reception error rate of the modulated signal;

means for comparing the measured reception error rate with the corrected target reception error rate of the mobile station corrected by the higher hierarchy station;

means for correcting a ratio between a predetermined target received signal power value and the interference power value, or a predetermined target reception power value based on the result of the error rate comparison;

means for comparing the measured ratio between the received signal power value and the interference power value, or a reception power value with the corrected ratio between the target received signal power value and the interference power value, or the target reception power value;

means for determining the transmission power control bit for controlling the transmission power of the base station based on the result of the power comparison, and transmitting the spectrum spread signal having the determined transmission power control bit from the base station to the predetermined mobile station; and

means for varying, in the mobile station, the transmission power based on the determined transmission power control bit of the received spectrum spread signal.

Claim 16 (New). The transmission power control method of claim 15, wherein, in the means of correcting, the corrected target reception error rate of the mobile station corrected by the higher hierarchy station is structured by a predetermined upper limit target reception error rate and a predetermined lower limit target reception error rate, and

wherein the target received signal power value and the interference power value, or the target reception power value is not altered when the measured reception error rate is between the upper limit target reception error rate and the lower limit target reception error rate, and

wherein the target received signal power value and the interference power value, or the target reception power value is altered when the measured reception error rate is not between the upper limit target reception error rate and the lower limit target reception error rate.